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ABSTRACT

Available research on access to postsecondary vocational education and training (VET) and equity for disabled people was reviewed to identify the barriers that continue to confront disabled students interested in pursuing postsecondary VET and the factors that contribute to disabled students' success in VET in Australia and internationally. The three types of barriers discovered are those that prevent disabled people from doing the following: (1) accessing study options; (2) participating fully in their programs; and (3) achieving positive outcomes. Despite those barriers, large numbers of disabled people were achieving success in postsecondary VET, thanks to success factors at the following three major levels: (1) the level of the individual (control over one's life and surroundings; desire to succeed; well-planned goals; persistence; adaptability; and adequate social support network); (2) the service delivery system (adequate planning and preparation for postsecondary study; individualized service provision; sufficient staff awareness about disabilities; and incentives to deliver inclusive services); and (3) the political and legislative context (adequate political representation of disabled students; passage of appropriate legislation; and continuous monitoring and evaluation of the legislation's effectiveness against nationally recognized standards). The review highlighted the need for the following: consistent data collection, reliable evaluation and feedback, specialized training for teachers, coordination among services, and effective monitoring of equity procedures. (Contains 105 references) (MN)

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Vocational education and training for people with disabilities

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Executive summary

THE AIM OF the current study was to examine the available literature concerning access and equity for people with disabilities in relation to post-secondary school vocational education and training (VET). Specifically, the study aimed to:

- examine the access, participation and outcomes that are currently being achieved by students with disabilities in the VET sector
- determine the barriers that continue to confront these students
- identify the factors that contribute to successful outcomes
- review innovative models of service delivery both in Australia and internationally
- outline major areas requiring further examination

In terms of access, the review has shown that in comparison to people without disabilities, people with disabilities continue to have difficulty accessing post-secondary school training or education. Even if access is possible, the literature suggests that they have more difficulty in participating fully in that study and achieving meaningful outcomes as a result of their efforts.

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The remainder of the review is presented under two major headings, namely, barriers and success factors. The findings in both these areas will be summarised in this chapter from the perspectives of the three major stakeholders in the sectors, namely:

- students with disabilities
- service providers (i.e. educators/trainers)
- policy-makers and planners

Students with disabilities

For students with disabilities, it is necessary to recognise that the VET system is extremely complex and confusing, but there is a commitment to equity in these systems of which they must take advantage. The review has suggested that it is important for students with disabilities to assert their rights and demand access to sufficient information to enable them to make informed choices. In terms of assistance, the review has indicated that students must seek assistance whenever it is needed, advise authorities of any physical access difficulties they encounter or other problems with support services and contribute to data collection efforts that will improve their situation. This pro-active approach means that students with disabilities must become involved in attitude change and must register their disability needs despite the fact that this process can be humiliating and difficult. At a personal level, students with disabilities must endeavour to compensate for their disability-related problems as much as possible and seek counselling if necessary. They must persevere and maintain their support networks as these factors will enable them to overcome some inequity issues.

Service providers

Service providers in this industry must recognise that students with disabilities are confronting numerous inequitable practices. They must be aware of disability-related issues and must embrace the concept of inclusion. With a true understanding of inclusion, service providers are more likely to deliver individualised, flexible and empowering services that will combat inequity for students with disabilities. At the organisational level, service providers must ensure that they provide sufficient counselling/health services and support services that are appropriate for students with disabilities. They must also ensure that staff receive adequate training programs, information and incentives to address equity issues. It is the responsibility of the organisation to maintain standards in teaching practice, to monitor the appropriateness of support services and to audit the physical accessibility of their facilities. With regard to data collection, organisations must ensure that the procedures required from students with disabilities do not further disadvantage those students. Such procedural ease and clarity will encourage students to register their needs which will, in turn, provide institutions with reliable data to illustrate the demand that is being placed on their resources.

Policy-makers and planners

For policy-makers and planners, the major tasks identified in this review involve a monitoring and evaluation role whereby they ensure that connections are made among service providers, thus maximising the likelihood that adequate preparation and planning occurs for individual students. Monitoring must also occur in terms of standards and training to ensure the implementation of policy in practice. Similarly, the physical access plans of institutions must be monitored with rewards or repercussions being contingent on the outcomes. Another role for policy-makers and planners is to examine impact of funding models at the level of the individual student and put in place mechanisms to protect students with disabilities from any negative implications of funding. Finally, policy-makers and planners should be responsible for ensuring that consistent and useful data are collected and made available to all stakeholders in a useable format.

Context

THERE ARE THREE major sectors in the education and training continuum in Australia, namely school (i.e. primary and secondary), vocational education and training or VET (e.g. technical and further education [TAFE]) and higher education (i.e. university). The current project focusses on equity in the VET sector.

The vocational education and training sector

The VET sector is responsible for the delivery of education and training programs that prepare people for work or improve the skills and knowledge of people who are already working (The Australian Training Information Network 1997). The sector is an extremely complicated network of government departments, statutory authorities, industry/employer representatives, employee/student/community bodies and public/private providers that is the responsibility of the Department of Employment, Training and Youth Affairs (DETYA) (formerly the Department of Employment, Education, Training and Youth Affairs [DEETYA]).

The Australian National Training Authority (ANTA) was established in 1992 to function as a national focus for VET in terms of strategic direction. In developing strategic plans for the sector, ANTA ensures that the VET system is responsive to industry needs and adequately represents all key stakeholders. Accordingly, ANTA is governed by an industry-driven board and maintains strong links with industry representatives, such as the industry training advisory bodies (ITABs).

Another major purpose of ANTA is the co-ordination and facilitation of the departments and bodies responsible for VET at the State/Territory level (State and Territory training authorities). ANTA was also intended to provide a

means of accountability and regulation. Finally, ANTA is responsible for the collection and analysis of appropriate statistics, a function that is fulfilled by the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) body, and for the funding and co-ordinating of research and evaluation, through the National Centre for Vocational Education Research (NCVER).

In terms of service provision, the VET system provides competency-based learning that ranges from general employment skills to specific craft-based skills and industry-wide skills that will transfer across a range of occupations within a generic category. Training programs are provided primarily at institutes of TAFE but may also be provided 'on the job' or within industry-based facilities. In recent years, the VET sector widened to incorporate the range of private providers who address the vocational skill-training needs of Australia's workforce. Training can be provided through formal structured traineeships and apprenticeships or informal short courses such as adult community education.

The trend towards access and equity

The last few years have been a time of extensive change in the area of post-secondary school options. A series of major reforms has changed the structure of the sectors as well as the manner in which they function. At the same time, there have been significant developments in the human rights and disability sectors that impact profoundly on VET and higher education. These trends have ensured that equity continues to be a major focus of service delivery and planning.

In the disability area, the most significant catalyst for change in terms of equity was the Commonwealth Disability Discrimination Act (DDA) which was adopted in 1992. The DDA provided a mechanism by which complaints could be resolved concerning a range of areas including education. This legislation followed closely behind the implementation of the Commonwealth Disability Services Act (1986) and the Commonwealth–State Disability Agreement (1992), which directed all States and Territories to adopt comparable disability legislation, ensuring the rights of people with disabilities. At the same time, State and Territory legislation in the rehabilitation area has mandated the delivery of appropriate vocational retraining and support for people with work-related disabilities or injuries

caused through motor vehicle accidents. Consequently, access and equity for people with disabilities has become a major force that has penetrated the VET and higher education sectors.

Accessibility for all Australians was one of the four primary themes that directed the first ANTA National Strategy released in 1994. Subsequent to this strategy, a review conducted in 1995 suggested that, although much had been achieved, improvements were still required in terms of equity. The Ministerial Council agreed that access and equity for people in under-represented client groups (including people with disabilities) was a critical area for development in 1996. Consequently, the topic of access and equity was listed as a priority theme for the 1996 State and Territory training profiles, necessitating a commitment to planning in this area. Again in 1997, access and equity was identified as a priority direction in the VET sector.

The ANTA Disability Forum was established in 1996 and was given responsibility for providing advice and strategies for achieving outcomes for people with disabilities in the VET sector. To develop these strategies, the forum works co-operatively with peak disability bodies and consumer organisations, training providers, industry and employer groups and the relevant government bodies. Once strategies are developed, the forum is responsible for monitoring and implementing the strategies.

The current review

Clearly, the current commitment to anti-discrimination and human rights has precipitated a trend towards favourable conditions for people with disabilities in the VET sector. Despite these trends, access and equity for people with disabilities remains elusive. Further, people with disabilities may be the most poorly recognised of all the under-represented groups, particularly in terms of published material. The plight of this group appears to receive the least attention, possibly as a result of the subtle but insidious myth that people with disabilities are not able to benefit from post-school training or education. The purpose of this review is to examine the current situation for people with disabilities in the VET sector and to identify the factors that hinder or facilitate their entry and progress.

The current report will review the access, participation and outcomes of the VET sector in relation to people with disabilities. The report will then examine

the barriers that prevent equity for this population. Success factors and innovative models will be presented at three levels, namely the individual, the service and the policy levels. Finally, the report will translate these barriers and success factors into recommendations and will outline areas that need further investigation.

Access, participation and outcomes for people with disabilities

'AUSTRALIANS WITH DISABILITIES should enjoy the same human rights as everyone else in our community' (Burdekin 1995, p.8). A major objective of ANTA is to ensure that the education and training services in Australia are responsive to the needs of people with disabilities. This objective suggests that people with disabilities should have the right to access post-secondary education or training, but should also expect that such education or training will result in positive outcomes.

In the past decade, there have been numerous initiatives to increase the access individuals with disabilities have to post-secondary school education and training. However, despite these efforts, there is evidence that post-secondary training and education remain inequitable for people with disabilities (The Australian Training Information Network 1997).

Failure in the vocational education and training sector has long-term implications for people with disabilities, such as chronic unemployment or relegation to the unskilled workforce (ANTA 1996). In contrast, successful training experiences have been found to increase the psychological well-being and self-care ability of people with severe disabilities (Pirfo et al. 1994). These data suggest that vocational education and training can have positive and lifelong consequences for people with disabilities if barriers to access are addressed.

Equity in vocational education and training

When a group of individuals has less opportunity than others as a result of a particular characteristic (i.e. disability), the issue becomes one of equity. The terms equity and equality are often confused. Whereas equality refers to treatment that is equal across individuals or groups, equity refers to treatment

that is fair or socially just. In some instances, the two terms can be used interchangeably. However, in other cases, equal treatment may be the cause of inequity for people with disabilities.

In the vocational education and training area at both VET institutions and in higher education, inequity can occur at various levels:

- enrolment numbers in general
- the distribution of people with disabilities across different courses and levels of difficulty
- the level and rate of completion
- the number of successful graduations
- the subsequent employment rate
- the level of earnings
- the extent to which individuals feel satisfied with the experience

Prior to examining these statistics, it is important to note that the reliability and validity of data vary considerably, particularly given the range of uncontrolled factors. Further, only minimal data are available. Nevertheless, the remainder of this chapter will attempt to consolidate the findings that exist in relation to these types of under-representation for people with disabilities.

Enrolment in courses and training programs

Australian Bureau of Statistics (ABS) data collected in 1993 indicated that approximately 18% of the general Australian population reported having a disability. When only those people between 16 and 24 years of age were considered (i.e. entry-level age for post-school education and training), the percentage of people with disabilities was approximately 10%. Consequently, it would be reasonable to expect that a similar proportion of students might be seen in the education and training sector.

In contrast to this expectation, the ABS found that the likelihood that individuals would participate in education, training or employment was significantly reduced by disability (ABS 1993). Indeed, this study showed that over one-quarter of individuals with disabilities, who were not studying, indicated that their condition prevented them from doing so. Of all persons with a disability aged 15 years and over, 28.9% were engaged in full-time study. In contrast, 38.4% of the general population over 15 years of age were engaged in full-time study. People with disabilities were slightly more likely

to be engaged in part-time study than people without disabilities (60% of the total disability population versus 50% of the total population). However, the total participation rate in education for people with disabilities was only 5%, compared to 10% in the general population. The participation rate declined as the severity of disability increased, indicating that those with severe disabilities had little likelihood of participating in education or training (to approximately 50%). Students in VET courses are most likely to have physical, visual, learning and hearing or intellectual disabilities in descending order of frequency (ACVETS 1994). Disabilities such as brain injury and psychiatric illness are not commonly represented in the VET sector.

Irrespective of the type or severity, 3.2% of all TAFE students indicated that they had a disability (ACVETS 1994). However, as 25% of the students at TAFE did not indicate their disability status, no conclusions can be made regarding the total percentage of students with a disability. After controlling for non-reporting rates, the participation rate of students with disabilities in TAFE courses was 4.3% across Australia, but ranged from 1.2% in Western Australia to 6% in New South Wales (ACVETS 1994). Similar figures were found in 1995 (ACVETS 1995) and 1996 (ACVETS 1996). However, in 1997, NCVER found that 6.3% of all TAFE graduates had a disability. Although based on a 55% response rate only, this finding suggests that there may have been some improvement in representation over time.

Unfortunately, access statistics are collected at the time of enrolment, when many students may be unwilling to nominate their disability or may be unaware that their disability will create problems. This data collection procedure creates significant difficulties in terms of producing reliable and meaningful statistics because the needs are not reflected in the data and nor is the progress of students with disabilities.

Pass-completion rates

Access to VET studies does not infer that progress will occur at the same rate for students with disabilities as for students without disabilities. Module completion rates have been found to be between 2% and 8% lower among students with disabilities than among the general student body (ACVETS 1994–1996). This difference was apparent at all course levels from preparatory to professional, but was most noticeable at higher levels (NCVER 1998). However, these statistics also showed that people with disabilities took longer

to complete those studies, resulting in a significant amount of missing data that could have influenced the accuracy of the pass-rate statistics.

Level of courses and training programs

As noted by O'Connor and Watson (1991), 'students with disabilities have the right to choose admission to any course on the basis of merit alone, or under special consideration provisions—it is inappropriate to restrict student choice' (p.1). However, there is evidence that people with disabilities are more likely to be enrolled in part-time certificate courses than people without disabilities (ABS 1993). In the TAFE sector, 42% of students with disabilities were enrolled in preparatory courses in 1994 compared to 19% of students without disabilities (ACVETS 1994). Only 37% of students with disabilities were enrolled in higher-level courses compared to over 60% of those without disabilities. Similarly, in 1996, 50% of students with disabilities were enrolled in preparatory courses (ACVETS 1996). Multi-field studies accounted for the enrolment of the majority of students with disabilities in 1996 (one in two compared to one in five for students without disabilities) (ACVETS 1996). Only 23.8% of students with disabilities were enrolled in trade-level certificate courses or above compared to 38.6% for students without disabilities.

Qualification profiles

The likelihood that a person with a disability will successfully achieve a tertiary qualification (i.e. Bachelor degree or higher) is reasonably small in comparison with the general population (ABS 1993). In this regard, statistics have indicated that 13% of individuals with disabilities possess a qualification at this level while 22% of the general population have tertiary degrees. However, when certificate or diploma-level qualifications are considered, the percentages appear to be similar across the two populations, with slightly more likelihood that a person with a disability will have obtained a qualification at this level (85% and 77% respectively). It is pertinent to note that the survey conducted by the ABS regarding qualification profiles did not identify people who had acquired their qualification prior to the onset of their disability. Profiles relating to post-disability qualifications only would be likely to be significantly smaller. An ABS (1995) survey confirmed that successful TAFE graduates with disabilities were more likely than those without disabilities to have obtained a non-specific certificate (over 50% compared to 40%) and less likely to have obtained higher qualifications (i.e. a trade certificate, associate diploma or diploma).

Employment levels

According to government policy, the highest outcome of education and training is employment for people with disabilities.

> *People with disabilities have the same right to work as any other Australian. Access to employment is basic to our quality of life, our financial independence, and it brings the opportunity for increased self-esteem and community participation.* (Kemp 1997, p.1)

Most jobs in the future will require post-secondary school education (Brown 1989). However, at the end of their studies, people with disabilities often have no opportunity to integrate into the workforce. For many students, their training becomes a 'dead end' (Ticoll 1995, p.6). Inability to access skills was one of the most commonly identified barriers to vocational return after traumatic injury, being nominated by over 50% of the sample (Jonczyk & Smith 1991).

The labour force participation rate for the general population was 69%, whereas the rate among those with disabilities was only 39%. In 1993, 1.1 million people with disabilities over 15 years of age were unemployed or under-employed (ABS 1993). When only working-age people are considered, the unemployment rate among this group was significantly greater than among those without disabilities (21% versus 12%). Among TAFE graduates, it was found that approximately 50% were employed in any capacity compared to over 70% for the remainder of the graduates (ABS 1995). Further, graduates with disabilities had generally taken longer to find employment and found that their course was unrelated to their vocation. Similar findings emerged in 1997 (NCVER 1998).

When employed, people with disabilities were more likely to report a part-time capacity than people without disabilities (i.e. 30% versus 25% in the general population) (ABS 1993). Further, participation in the labour force varied across the industries, with the mining, agricultural, forestry and fishery industries being more likely to employ people with disabilities than the retail or public service industries (i.e. sales, service, marketing etc.). A study conducted in the USA found that the top five jobs held by people with disabilities were related to cleaning (Walls & Fullmer 1997).

Earnings

A major implication of lower qualification profiles and higher levels of unemployment for people with disabilities is the discrepant earning capacity

of this group. Lamb, Long and Malley (1998) showed that higher levels of education are strongly related to higher earnings and that qualifications in science areas result in higher average weekly earnings than qualifications in the humanities or service industries. Consequently, it is not surprising to find that disability was negatively associated with level of earnings, especially for women. An interesting study conducted in Hong Kong (Tse 1994) found that employees with intellectual disabilities were paid approximately 30% less than employees without disabilities, even when performing the same job. However, when performance quality was rated, these employees exceeded expectations in seven areas of job performance and satisfied expectations in 13 areas. The remaining five areas where people with disabilities failed to meet expectations of employers included experience, education level, transport issues, appearance and personality.

Satisfaction with courses

Perhaps the most important outcome of vocational education and training, in addition to employment, is the satisfaction of the individual that the effort required to participate in such a course was worthwhile. Such data are not regularly gathered. However, some research has indicated that people with disabilities report being wary of training courses because they often fail to meet their needs or the needs of the local labour market (Jonczyk & Smith 1991). Specifically, the 650 people with disabilities interviewed by Jonczyk and Smith indicated that up to 40% of the training courses they had attempted in the past had produced undesirable results of some nature. A recent speech presented by the Disability Discrimination Commissioner (Hastings 1997) indicated that about 10% of the complaints received under the Discrimination Act related to education. In 1997, 99 complaints were lodged with the Human Rights Commission, an increase from 22 in 1992. However, the Commissioner noted that many of these complaints related to access to the schooling system rather than the post-school system. In relation to the post-school sector, she stated that complaints were usually resolved through conciliation prior to formal hearing.

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Summary

Although the current trend in Australian society is to ensure that education and training services are responsive to the needs of people with disabilities, statistics show that people with disabilities are not able to access post-

secondary school study at the same rate as people without disabilities. They are also over-represented in lower-level courses and have poorer completion rates. In addition, study at this level is less likely to translate to employment for students with disabilities than it is for people without disabilities. Despite the fact that available statistics are not reliable, they are a broad indicator of current inequities. Much has been achieved in this area, yet progress remains slow and barriers still exist that must be addressed.

Barriers to post-secondary school options

THE DISABILITY DISCRIMINATION Act (1992) supports the admission of students with disabilities to all levels of post-school training and university education. The legislation recognises that equitable access to services such as training and education can enhance the personal aspirations, realisation of potential, independence and self-esteem of people with disabilities (Trowbridge 1993). Despite this legislation, there is evidence that post-secondary school training and education remain inequitable for people with disabilities (The Australian Training Information Network 1997), a situation that leads to low levels of employment and an over-representation of this population among the unskilled workforce (ANTA 1996).

Researchers have identified a range of significant barriers that prevent equity for people with disabilities. For instance, barriers are created by the lack of adequate links or collaboration between the various training and educational institutions and across different sectors (Barnett et al. 1997). Ticoll (1995) found that barriers existed at the level of legal and policy frameworks, teaching practices or personal issues associated with particular disabilities. Baron, Phillips and Stalker (1996) identified another set of barriers that included the psychological coping of the individual, the existence of discriminatory attitudes and the failure to adequately implement equity policies. Other researchers have identified the major barriers that arise for people who have a disability as well as being female, non-English speaking or from a rural area (Newman 1992; Wagner 1992). Surprisingly, several studies have continued to identify physical and informational access barriers, particularly in areas where practical training is required (Heidari 1996; Reindal 1995).

In his review of equity, Kent (1997a, p.15) concluded that 'fair, equitable and accessible education is a human right which this country is not currently fulfilling'. According to Kent, our ability to rectify this deficiency must be

developed if our country is to progress. Consequently, it is imperative that the barriers to post-secondary school training and education for people with disabilities are thoroughly examined and addressed.

Appropriate pathways, transitions and linkages

Students with disabilities often experience the frustration associated with poor linkages in their service networks, both horizontally and vertically. For many students with disabilities, there is no clear pathway through the various levels of the education, training and employment system and inadequate preparation. As a result, the transition between each level can be unsuccessful, leading to failure at the subsequent level. At any point in this vertical chain, people with disabilities are likely to experience problems as a result of the lack of co-ordination among the many services they require.

Vertical connections

While the school sector has given some attention to vertical transition issues, it has been claimed that the VET sector has overlooked its responsibility in this regard (Robinson 1997). This finding is particularly important as over 80% of VET students study to obtain employment, a transition that will usually require considerable support for students with disabilities.

Riches (1996) defined transition as a 'process of changing from one state, activity or place to another' (p.71). She stated that the transition of students with disabilities from school to post-school training or education options is particularly crucial, often affecting later participation rates in employment and quality of life. A recent review conducted by ANTA (1997) found that the 'poor links' between schools, VET and work significantly limited the ability of people with disabilities to achieve their goals. This continuum has been found to lack cohesion and clearly defined pathways for people with disabilities and their families/carers (Aune & Friehe 1996).

Without appropriate guidance or clearly defined pathways, many people with disabilities are likely to develop limited vocational goals (Shaw et al. 1987) and assume that post-secondary school education or training is beyond their capability (Dooley-Dickey & Satcher 1994). Unfortunately, young people with disabilities often fail to receive adequate preparation for the transitions they will encounter during their path to employment (Riches 1996), leading to a higher probability of school dropout, unemployment or under-employment,

lower-earning capacity and dependency (Johnson & Rusch 1993; Martin et al. 1993).

Unfortunately, transition programs are not available to all students and, if available, are not commenced early enough in their education. Further, transition programs rarely form a coherent plan that can guide the student through the entire pathway from school to work. Instead they are often treated as 'add-on' programs that are specific to particular institutions (Stodden & Leake 1994).

Horizontal collaboration and co-ordination

For students with disabilities to succeed in training and education, it must be recognised that they have complex needs that cross many of the artificially prescribed government boundaries. Diverse services such as transport, housing, personal care and support must all be considered if students with disabilities are to succeed in education and training. As Barnett, Jardine and Wilson (1997) noted, there is a confusing array of services and programs that exist to meet the needs of students with disabilities. Rose (1995) also described the 'bewildering' number of 'offices, institutions, procedures, arrangements and inter-links' people with disabilities are required to negotiate, a system he considered to be 'fundamentally flawed'. Research clearly suggests that the success of each student depends on the co-operation and co-ordination of all these components (Barnett et al. 1997).

However, in the current system, there is little shared knowledge across the various components of this service network. Indeed, the absence of a co-ordination and monitoring mechanism (sometimes referred to as case management) has been identified as a barrier for individuals with disabilities, especially in the area of training and education (Barnett et al. 1997). Lack of co-ordination leads to serious problems in terms of service duplication, confusion, frustration and added financial burden for the student. Further, the rigid boundaries that can exist between service providers create the potential for gaps in service provision (Barnett et al. 1997), leading to the existence of unmet needs for the student.

Student disincentives

Researchers have found that the costs associated with disability are a major barrier to participation in education and training, if not a total obstacle

(Meekosha et al. 1991). Indeed, Shank and McCracken (1993) found that financial problems were one of the major predictors of dropout among vocational training students.

It is often the case that students bear the cost of providing necessary support services (Deafness Forum 1997). Further, students with disabilities are less likely than students without disabilities to have the spare time, energy or opportunity to engage in casual employment to support their study financially. In addition to the financial cost of studying, it is important to understand the extra time and effort that is required for students with disabilities to organise and implement the support services they require. Simply registering as a student with a disability can entail large amounts of paperwork together with personal interviews and delays. Consequently, these students who may require more effort to learn than that required by students without disabilities may have less time to devote to their studies because of the procedures they must follow.

Personal issues

As a result of their disability or combination of disabilities, individuals are likely to experience a range of personal issues during the course of their study. For instance, students with disabilities may experience learning problems, emotional or behavioural problems, interpersonal problems and health problems that are directly related to their disability and interfere with their ability to succeed in vocational education and training. In addition to these disability-related problems, each student will have his or her own coping and adjustment issues to address. These disability-related and coping issues will be examined further below.

Disability-related issues

The following statements from students with disabilities effectively illustrate the disability-related barriers they commonly face:

> *I find it difficult to become motivated because my disorder frustrates me . . . very difficult to understand some lectures due to language barriers . . . difficulties with non-automatic doors . . . difficulty in use of library amenities until I found out about help services . . . I have a problem with sitting—too embarrassed to bring pillow . . . lack of a quiet area with suitable lighting for my eyesight problem . . . just getting around, I can't stand for long periods . . . hearing people in noisy situations.*
>
> (Boreham 1997, p.113)

These statements suggest that several consequences of disability can create major barriers for post-secondary school studies (Shank & McCracken 1993). The combination of problems that are likely to arise as a result of a disability is as unique as the individual who has the disability (Elkins 1994), but may include problems in learning, behaviour, communication, health or fatigue.

In a study of high school graduates, 50% of those with learning problems continued to further education, but one year later, only 6.5% of these students were still studying (Sitlington & Frank 1990). The presence of learning problems is likely to necessitate considerable support costs for an institution (Vander-Putten 1993). In terms of equity, Peraino (1992) found that the participation rate of students with behaviour disorders was considerably lower than that of students without disabilities and students with other disability-related problems. Carter (1996) also found that the needs of people with psychiatric problems in post-secondary school education and training were largely unmet. Similar difficulties are likely to be experienced by students who have interpersonal communication problems as a result of speech or language disability or because of impaired social judgement. The ability to participate will also be limited by the significant health problems (e.g. epilepsy, heart conditions, diabetes) that are often associated with disability. Such problems are likely to become serious barriers to successful participation if they render the normal academic and social activities difficult or impossible to perform. For instance, Preece (1995) found that health issues were nominated as one of the primary difficulties faced by many students with disabilities. Such problems are likely to ensure that full participation in the social culture of an education or training institution is difficult, which will then influence academic functioning (McIntyre et al. 1995).

Indeed, full participation in any pursuit requires the ability to interact and communicate with others in a manner that facilitates the attainment of personal goals (Abery et al. 1995). As noted by Price, Johnson and Evelo (1994), support for people with disabilities has focussed on academic skills while socio-emotional aspects are ignored.

Dual disadvantages

When disability is combined with disadvantage that arises from another source, such as residence in a rural or remote area, the difficulties are twofold. For instance, studies have found that female students or non-English-speaking students with a disability were more disadvantaged than English-speaking

male students with a disability (Newman 1992; Wagner 1992). Carter (1996) also found that little was known about the needs of Aboriginal and Torres Strait Islander students who also had a disability and were studying in the TAFE system.

Support services are usually designed to address only one equity issue and are not likely to address the needs that arise from the second equity issue (Trent 1995). The student may also find it difficult to comfortably align himself or herself with a particular social group, thus reducing access to natural supports (Pane 1993). Consequently, these students may not receive adequate support to overcome their significant difficulties (Barnett et al. 1997).

Personal coping issues

The ability of students with disabilities to cope with VET studies will vary depending upon the type of disability, the severity of the condition and, in some cases, the length of time for which the student has experienced the disability (Hill 1991). However, the most significant barrier faced by many students with disabilities involves their attitude towards their own success. Low levels of self-esteem, associated with years of dependency and the low expectations of those around them, can interfere with the desire to achieve (Low 1996). Clark and Hirst (1989) noted that the treatment of people with disabilities tends to breed under-achievement, low motivation and low self-esteem.

Students with a disability can encounter various forms of labelling, stigmatisation and gatekeeping (Baron et al. 1996). If they are to succeed in the VET environment, they must develop strong coping mechanisms (Varga 1997). Although a person with a disability has been found to be their own best advocate in the post-secondary school setting, it is unreasonable to expect that they should be responsible for organising their own support services (Aune & Friehe 1996).

Understandably, many students who participate in education do not want to be perceived as having a disability (Baron et al. 1996). Accordingly, these students avoid using disability services and fail to register their disability status. Indeed, one study found that only 1% to 3% of students with disabilities requested special assistance of any form, despite the fact that almost 9% of first-year students identified themselves as having a disability (Hartman 1992).

Physical access issues

In 1992, Australia adopted a standard for designers regarding the provision of accessible buildings and facilities. Although many of the physical barriers to education and training have been rectified as a result of this standard, access throughout the country still remains problematic (Boreham 1997). For instance, an accessibility audit conducted by the SkillShare organisation when it first commenced operation in 1991 indicated that only 37% of the projects were rated as partly or fully accessible (Banks et al. 1995).

In a survey of campus students conducted in 1993, Denny and Carson found that 26.8% agreed that physical access remained their greatest obstacle to tertiary study, second only to the academic barriers created by teaching practices, materials and poor support services, which were nominated by 51.2% of the students. Steep access ramps, absence of parking spaces available near buildings, inadequate transport services and access to the facilities contained within buildings (e.g. toilets, service counters) were major barriers. Loope (1996) also found that inaccessibility was common in library facilities. As one student who used a wheelchair commented, 'it can be difficult accessing aisles to browse when piles of books are left on the floor, and the stools are left in the middle of a row' (Anderson 1995, p.6). Loope's study indicated that students needed more visible call numbers on books, physical support to operate equipment and accessible desks. Some research has suggested that students with disabilities may have less physical access to particular career paths. For instance, researchers have found that the height of benches in science and engineering labs do not accommodate wheelchairs (Heidari 1996). This discipline-specific physical barrier immediately excludes students with disabilities from pursuing vocational options in these areas.

It is important to note that 'mobility is not only an issue of whether a student is physically able to climb stairs or walk across campus—it is also an issue of the amount of time and energy such climbing and walking requires' (Low 1996, p.238).

Information barriers

Evidence suggests that people with disabilities lack access to information concerning the VET system and the supports that can facilitate their access to

these programs (Barnett et al. 1997). This study also suggested that professionals in the disability area lacked information about post-school options for people with disabilities. Finally, Barnett, Jardine and Wilson noted that educators lacked knowledge about disability and the related educational needs. Clearly, such informational barriers will prevent individuals with disabilities from succeeding in their studying pursuits. Each of these issues will be discussed in more detail below.

Information for people with disabilities and their families

In a study conducted by Goldberg (1989), it was found that the development of vocational aspirations increased from the ages of 11 to 13 years and then plateaued and remained relatively stable from the age of 14. These findings suggest that career guidance and information must be made available to students with disabilities in the second half of their primary school and through secondary school.

However, people with disabilities have reported a lack of information available to them about programs within the VET system and the supports which can facilitate access to these programs (Barnett et al. 1997; Reindal 1995). Further, some research suggests that guidance officers in schools tend to direct students with disabilities away from post-secondary options (Barnett 1993). According to Baron, Phillips and Stalker (1996), this information filtering process can lead to a 'self-censorship' effect whereby students eliminate themselves from the option of further education and training. Furthermore, because they are unaware of their rights and opportunities, students who have accessed post-school education may be less able to advocate for services to address their needs.

Information for disability professionals

There is a lack of information about post-school options for students with disabilities among professionals (Barnett et al. 1997), and even among regional disability liaison officers (Deafness Forum 1997). Indeed, Barnett, Jardine and Wilson (1997) found that within the disability sector, even the acronym 'VET' was not understood (Barnett et al. 1997, p.25). This situation presents a major barrier for students with disabilities as these professionals are likely to be advising potential students. Consequently, the likelihood of people with disabilities being able to make informed decisions about their future is minimal.

Information for educators

For teachers, the lack of information about how to teach students with disabilities also presents a significant barrier, particularly as most teachers have had little exposure to such students (Baggett 1994). Much of the inequitable teaching that occurs in vocational education and training institutions may be attributable to a simple lack of knowledge. Indeed, it has been found that teachers have little understanding of the various disabilities and the educational needs created by those disabilities (Barnett et al. 1997). Although some institutions provide information booklets to their staff, there is generally a paucity of adequate material available for teachers. As most disability officers would not be able to meet and educate every teaching staff member, the provision of appropriate manuals and guidelines is essential.

Teaching practices

As Matijevic (1996, p.3) noted, a 'client-focussed vocational education and training system demands highly skilled teachers who can meet the needs of students with a disability'. However, for several reasons, teaching practices often fail to address the needs of students with disabilities. These reasons include:

- inadequate teacher education
- insufficient teaching incentives
- lack of adequate teaching support
- inappropriate materials or assessment procedures

Most teacher education programs have not required teachers to complete any special education training. In the VET sector, the likelihood of standardised training in disability-specific teaching strategies is even less likely, as many instructors do not have teaching degrees (Mathieson 1996). Many teachers, therefore, are ill-equipped to meet the needs of students with disabilities (Dittman 1996), particularly students with psychiatric disabilities (Carter 1996). Further, teachers may not even perceive the areas in which their own practices could be modified.

Andrews (1991) suggested that support was necessary for students with disabilities in relation to assessment and examination assistance, additional

academic tutoring, remedial assistance, administrative assistance, career advice, note-takers and access to personal computers. As Matijevic (1996) noted, there is a need for education and training providers to understand that students with disabilities may learn in different ways and may need only minor adjustments to study material. Despite widespread agreement that students with disabilities require additional teaching support, the lack of adequate support available to these students continues to be a barrier (Dittman 1996).

Recently, the VET sector has adopted an assessment model based on the performance of competency criteria. In this system, students demonstrate competence in a number of key areas that are necessary for employment and work-related skills for each industry. Although the system allows for flexible pathways, recognition of prior learning, and earlier introduction to vocational competencies in the school system, some researchers have indicated that competency-based assessment may significantly disadvantage people with disabilities in the absence of suitable preparation or bridging courses (Barnett et al. 1997).

At present, there are few incentives available to encourage teaching staff to make special adaptations to their regular teaching practices to accommodate students with special needs (West 1997). Such accommodations are often made at the expense of the individual teacher, especially because reward structures often focus on the attainment of other performance indicators, such as research or administration.

Attitudinal barriers

Discriminatory attitudes can exacerbate and underpin many, if not most, other barriers and are the most difficult to address (Barnett et al. 1997).

Attitudinal barriers can be defined as 'attitudes on the part of staff and other students which reveal at worst outright hostility . . . and in the mildest form, indifference' (Barnett et al. 1997, p.34). Negative attitudes of teachers towards the inclusion of students with disabilities are often 'rooted in fear, lack of understanding of disability issues, and lack of knowledge about inclusive practices' (Rocher Institute 1996, p.4). As noted by one group of researchers, 'it is one thing to gain access to a university; it is quite another to be "accepted" by fellow students—without a positive interaction with fellow students,

gaining entry to university may prove to be a hollow victory for students who are disabled' (Gannon & MacLean 1995, p.63). Negative attitudes of faculty and teaching staff are often cited as barriers to the successful completion of academic classes and programs by students with disabilities (Burgstahler 1994). Equity strategies for students with disabilities can be seriously undermined if fellow students and staff fail to support their implementation (Gannon & MacLean 1995).

A study conducted by the Open Learning Institute (1994) found that students with disabilities in VET courses strongly criticised the unsympathetic attitudes of some staff and their inflexibility regarding the accommodation of special needs, particularly in relation to teaching delivery methods and assessment procedures (Barnett et al. 1997).

Some evidence suggests that attitudinal barriers are particularly prevalent in the science and engineering fields, resulting in a disproportionate representation of students with disabilities in the social science and health fields. Staff in these human service areas have generally been found to express greater empathy towards people with disabilities than those in other areas (Gannon & MacLean 1995).

Funding models

In a report conducted by Meekosha, Jakubowicz and Rice (1991), funding was found to be a critical issue in whether or not students with disabilities were admitted to post-secondary school studies. For instance, as one senior educational administrator noted 'we won't be going out recruiting ... we couldn't afford to pick up more than a few a year' (p.25). This comment confirms the conclusion that, at present, available funding models do little to support the inclusion of people with disabilities in post-secondary school education and training. However, as Hartley (1996) noted, the cost savings that could be generated by investing in the education, and subsequent employment, of people with disabilities is likely to be significant.

At present, most funding models operate in terms of a block operating grant which, in some cases, is tied to the number of enrolments. Under this model, institutions have significant incentive to increase the quantity of enrolments but not their quality (Industry Commission 1997). This model is not sufficient unless the high cost of adequate support services are funded as an extra

outlay (Hartley 1996). Using current performance indicators (i.e. completion rates, contact hours etc.) as a basis for funding will always disadvantage people with disabilities who complete at slower rates and require more input (Barnett et al. 1997).

In the last year, there has been discussion in the VET sector about a move towards an individualised funding model (user choice). The purpose of user choice funding is to provide greater market power to students and necessitate responsiveness on the part of the service provider. The user choice model has significant advantages for students with disabilities in that they will have greater choice about where to study and are more likely to be accepted. However, in terms of full participation and quality outcomes, the user choice model still does not address the fact that the cost of education increases with disability.

There is also a trend towards competitive tendering in the educational setting, under the assumption that free-market forces will produce a more efficient system. However, researchers have noted that market forces will not ensure that the system will also become more responsive to the needs of people with disabilities (Barnett et al. 1997). The unquestioned faith that market forces will ensure good outcomes has been identified as the most disturbing feature of the competitive trend (Wells 1997), particularly as costs will be trimmed as much as possible to secure contracts.

As Saltmarsh (1994) noted, social justice agendas are often overlooked when government departments imitate private sector practices. He concluded that governments have the potential to provide significant incentives for social justice, such as wage subsidies, penalties and quotas, that will be lost with an economic focus. Kent (1997b) stated that an education and training system that does not address social justice and equity simply serves to replicate the social and economic disadvantage people with disabilities experience.

Insufficient data and evaluation

The lack of reliable data and sufficient evaluation has been recognised as a consistent barrier in the educational area (Barnett et al. 1997). The difficulties associated with insufficient data have already been briefly alluded to in the section 'Access, participation and outcomes for people with disabilities'. Specifically, the absence of data can prevent people with disabilities from

achieving adequate levels of access, participation and outcomes, simply because their needs are not evident or data are misleading. Mathieson (1996) found that data were particularly lacking in relation to the numbers of people with disabilities who accessed post-secondary school studies, their needs and the success of their service delivery.

Until adequate data are available concerning the success of people with disabilities in various educational pursuits and the efficacy of particular support programs, little can be done to substantiate the need for increased resources. Further, without evaluation and ongoing research, it is unclear as to whether services and institutions are actually meeting the needs of people with disabilities. As Hartley (1996) noted, without adequate information on which to base practices, service delivery and support will continue to be ill-focussed and inappropriate.

Policy implementation difficulties

Numerous policies have been designed to address the needs of people with disabilities and other individuals in equity groups. Indeed, the legal and policy framework of the vocational education and training sector is an important determinant of the degree to which people with disabilities can access post-school training and education (Ticoll 1995). Despite favourable legislation, barriers to education and training continue to exist. This situation arises partly due to the discrepancy that often exists between 'policy-on-paper' and 'policy-in-practice'. Legislation can increase the likelihood of practices that are equitable, but often fails to precipitate the attitudinal change that is necessary for actual progress. Further, funding models often fail to reflect the philosophical base of legislation, thus contributing to the discrepancy.

Even when appropriate legislation has been adequately implemented, there has been insufficient monitoring of the quality of outcomes for people with disabilities. Without reliable evaluation procedures, policy-in-practice may never reflect policy-on-paper. As Mathieson (1996) noted, the onus of responsibility for monitoring programs and supports is often unclear at the practical level. Although ANTA and the State or Territory training authorities exist for this purpose, the ability of these bodies to oversee individual programs is limited.

Summary

As can be seen, barriers that prevent people with disabilities from achieving their right to equitable vocational education and training exist in a range of areas. Specifically, researchers have noted significant barriers are created by:

- the lack of adequate pathways and transitions between the various levels
- poor co-ordination across numerous services
- unhelpful legal and policy frameworks of particular institutions
- non-inclusive teaching and assessment practices
- the lack of knowledge about teaching students with disabilities
- the problems associated with disability
- the existence of dual disadvantages
- the psychological coping of the individual
- the existence of discriminatory attitudes and practices
- the failure to adequately implement equity policies
- the physical access barriers
- the difficulty accessing information

It is imperative that these barriers to post-secondary school training and education for people with disabilities are thoroughly examined and addressed.

Success factors and innovative models

ALTHOUGH BARRIERS ARE evident in the vocational education and training system, it is important to note that a reasonably large number of individuals with disabilities achieve success (Reis & Neu 1994). Most literature focusses on what goes wrong in the educational and training sector. Although removal of these barriers and flaws will enhance access, participation and outcomes for people with disabilities, much can be learned from what goes right (Padilla et al. 1996). In many cases, the success factors will be the antithesis of the barriers. However, it is also likely that other success factors exist. It is important to examine the factors that are associated with success as these factors will provide the greatest potential for improved service delivery. In this regard, the distinction between post-secondary completers and dropouts can be determined with reference to the environmental factors in the institution and the social integration of the individual (Shank & McCracken 1993). Other studies have identified personal habits that contribute to success, such as motivation and self-determination (Baggett 1993). Nevertheless, researchers have also found that success is dependent on the adequate implementation of equity strategies, such as tutorial assistance or alternative assessment (Gannon & MacLean 1995).

In an attempt to address barriers and facilitate success, several innovative programs have been conducted throughout Australia and overseas at both the VET and tertiary levels. Although the information contained in this chapter is not exhaustive, it identifies the major success factors in the vocational education and training sectors and illustrates these factors by describing several major innovative service delivery models that may have application in the sector.

Individual-level success factors

Many personal factors will assist an individual to succeed in VET, including factors such as emotional stability, family functioning, personal study habits and so forth. For students with disabilities, it has been found necessary for them to exhibit qualities that will enable them to overcome huge barriers. For instance, Hendricks et al. (1996) found that there were two major success factors that contributed to the persistence of students with disabilities in post-school education, namely goal determination and social support. Similarly, Gerber, Ginsberg and Reiff found that individuals with disabilities who were successful in their studies had a desire to succeed, well-planned goals, persistence and an adequate social support network. The degree of motivation required to maintain a positive attitude is illustrated by the student comment below:

> *Having a disability makes you work harder. Even if you do get knocked down, the ability to get up and bounce back and attain these goals is well worth the effort.*
>
> (Gerber, Ginsberg & Reiff 1992, p.117)

An innovative study conducted by Padilla et al. (1996) found that successful minority students were most likely to depend on a range of support-seeking strategies, such as family involvement in their study, creating 'family' groups on campus, participating as much as possible in group activities, seeking out nurturing persons and using support resources provided by the institutions. Allison (1996) also found that the success of students from minority groups in higher education hinged on their ability to attract peer support. Other researchers have noted that the development of natural supports for people with disabilities will enhance their integration in the community and the workplace as well as within the education system (Storey & Certo 1996).

Research has shown that programs involving a personal connection, such as a mentor scheme, are successful in terms of student motivation and increased success rates (Aune et al. 1996). In Australia, several programs have been delivered that aim to directly modify the motivation/self-determination and social support of students with disabilities and have reported considerable success with minimal input. An example of this model is the Masterkey Program conducted at Griffith University.

The Masterkey Program—Griffith University, Nathan, Queensland

The Masterkey Program operates at Griffith University across all four campuses. It focusses on first-year university students in any discipline if they come from one of the recognised equity groups. The program has three major elements, namely:

- an orientation program for students with disabilities to introduce them to the facilities at the university
- a workshop program that focusses on preparing students with disabilities for study and the demands of academic pursuits
- a peer mentoring program whereby first-year students are linked with a student who has been in the same study program for a greater period of time

Mentors receive an extensive introduction to mentoring and are supported at all times by the co-ordinator of the program. The co-ordinator also links mentors with staff so they can advocate on behalf of their 'student'. To date, students with disabilities have benefitted greatly from the program.

Service delivery factors

In general, success at post-school training and education has been attributed to adequate planning and preparation to increase the opportunities of students with disabilities to benefit from their study. Individualised services are also essential if people with disabilities are to succeed in their post-school training and employment. Unfortunately, the majority of training and education services do not operate on an individualised model (Greasley 1995). In addition, it is necessary to educate and inform staff and increase their awareness of the needs of people with disabilities. However, the expectation that increased awareness will translate to inclusive teaching practices is unrealistic in the absence of suitable incentives.

Preparing students for post-school options

Four major strategies have been employed to assist students with disabilities to enter post-school training and education in a state of preparedness that will enhance their success. First, there have been several programs designed to increase the basic competencies of students with disabilities, both prior to and

during post-school studies. Second, organisations have implemented the notion of individual program plans that outline a lifelong strategy to assist individuals to achieve their goals. Third, transition programs have been established to prepare students for the move between various levels of the continuum. Finally, attempts have been made to make information about post-school options more accessible, through technology and organised programs.

Development of basic competencies

People with disabilities often lack the opportunity to learn basic competencies, such as reading and writing (Power 1990), social skills, time management skills and problem-solving (Riches 1994). While it is important that students with disabilities should not only study pre-vocational courses, it is also imperative that they be given the opportunity to reach a minimum standard, especially in a context of competency-based assessment. An innovative method of allowing students with disabilities to acquire basic competencies in a self-paced program that is easily accessed and has in-built transition prospects is the New Link Project (Jotham et al. 1996).

The New Link Project—University of Nottingham, UK

The New Link Project was developed in response to the needs of students with disabilities who lacked the skills necessary to enable them to succeed in higher-level studies in business and information technology. Specifically, the project focusses on the delivery of literacy, computer awareness, introductory business principles and so forth.

The principle of the New Link Project is that no individual will be excluded. The project is available through distance technology and encompasses most of Europe. Clients are active participants in their learning. At the conclusion of their studies, students are able to formalise their skills within the community businesses that have been established by New Link. Consequently, skills training can lead to employment opportunities.

Many of the New Link students have moved directly into employment in the open labour market as a result of the industry-relevant skills they have acquired. For most other students, their studies lead them to higher-level courses. Most importantly, graduates of the New Link Project indicate remarkable improvements in their self-esteem and ambitions.

Individualised program planning and transition

To date, individualised program planning (IPP) and transition services have been found to be associated with smooth transitions between school and adult life (Clarke 1994). However, they have focussed mostly on students with high support needs (Dun 1996) and have often not provided the range of skills that will be required in subsequent stages of life (Clark & Kolstoe 1990; Wehman 1992). Riches (1996) found that the critical features necessary for an effective transition included commitment at the policy level, planning that involves students, and all relevant parties, access to relevant and appropriate curricula, services and options, linkage to post-school options prior to leaving school and inter-agency co-operation and collaboration.

The ICAN Project—University of Massachusetts, USA

The ICAN (Initiating Career Achievements Networks) Project begins prior to the beginning of the academic year when a 'case manager' is assigned to each student. Case managers are provided with training and instruction booklets outlining their responsibilities. The confidential Individualised Career Program (ICP) is stored in the student's file at the disability office but students receive an updated copy at the beginning of each semester.

The ICP process begins with the identification of a career goal, although this goal may undergo significant changes during the course of study. The student has access to vocational assessments, counselling and career centres. The ICP documents the work history of the student and the work-related skills they have acquired. A plan is then developed by the student and the case manager regarding how further skills can be acquired or improved (i.e. through volunteer activities, participation in extra-curricular duties). The ICP also examines accommodations that are required to enhance academic performance. The ICP includes plans for the future. This section may document opportunities that can be taken in later years to increase employment opportunities. The ICP is then embedded in the social and leisure context of the student's total academic life. Accordingly, attention is given to the living arrangements, friendships and financial status that students currently have or would like to develop.

One of the most useful models of IPP is the My Way Project that has been trialled by the Hesley Foundation in the UK (Greasley 1995). In this project, the IPP process is begun early in the educational career of the child and the information eventually forms a curriculum vitae that can be used in the employment search. A similar concept has been used by the ICAN project in the USA (Baggett 1993), although the planning process begins just prior to the course.

Information services

Without information, people with disabilities will be unable to make informed choices. In addition, information about options, responsibilities and rights will enable students to anticipate problems they may encounter and prepare to address them. Several useful information booklets have been produced in recent years concerning the VET sector. The purpose of these booklets has been to inform, motivate and enable potential students with disabilities to make appropriate choices that reflect their own wishes. For instance, the pathways to your future booklet produced by the Department of Training and Industrial Relations (DTIR) in Queensland (1997) includes important information about courses, but also provides success stories of previous students and assistance in relation to the decisions that students may need to make. By providing this information, the booklet has the potential to motivate students with disabilities and encourage them to consider post-secondary school options.

The Good Universities Guide—Internet Resources

The placement of the Good Universities Guide on the internet makes the guide available to many school students with disabilities at no expense, provided they have access to a computer. The web site enables students to move through a series of choices that are clearly labelled and easy to follow. The guide outlines the range of issues students with disabilities might be interested in, including financial assistance, special entry schemes and support programs. By choosing an option, students can gain information about various support services available at each university together with contact details and costs (if relevant). The internet site for the Good Universities Guide can be accessed through <http://www.ashmill.com.au/uni.htm>.

A recent innovative information project was undertaken by the publishers of the Good Universities Guide, who placed their manual on the internet in a user-friendly format (1997). The guide includes a number of helpful pages regarding courses, administrative procedures, support services and financial advice specifically for students with disabilities. However, despite the value of this project, it is noted that the current trend towards visual interfaces and high-level technology may further disadvantage people with disabilities.

Individualised flexible and student-focussed service delivery

Hartley (1996) found that an individualised approach was vital to students with disabilities in the educational sector. Boote (1997) also noted that flexible learning is valuable for people with disabilities if they are assisted in their ability to 'learn to learn'. When students with disabilities have access to individualised support, researchers have found that graduation occurs at a similar rate to that found in the general student population (Ticoll 1995). These students were also likely to report high levels of employment within a shorter time period than usual.

In Australia, VET is moving towards an individualised and flexible method of service delivery which has significantly enhanced the access of people with disabilities by enabling them to study in the manner and timeframe that best suits them, with sufficient support. The individualised approach acknowledges that students with disabilities have a right to fair accommodations in assessment and teaching strategies.

A method through which institutions can facilitate individualised service delivery is by empowering students to monitor their services and advocate for themselves at the institutional level. Indeed, research has shown that initiatives for change have stemmed largely from student organisations (Meekosha et al. 1991). An innovative program conducted by the Weber State University attempted to facilitate such empowerment by assisting students with disabilities to develop self-managed support and advocacy groups. As described below, the program was extremely successful and had other benefits for the university in terms of data collection, needs analysis, service planning and attitudinal change.

Weber State University Empowerment Group

In 1986, Weber State University created a student senate to represent students with disabilities at the instigation of a student with a disability with backing from his department (Political Science Faculty). Since this time, various groups came and went until the concept of such a student body was embraced by the university. The group has become an ongoing activity that is supported at all levels. The organisation has three major goals, namely:

- to establish a means for students with disabilities to make their voices heard
- to create a support system for students with disabilities
- to provide leadership experiences and opportunities for students with disabilities

A key element associated with the success of the project was the empowerment of students. To ensure student empowerment, the university:

- develops a trusting relationship between staff and students
- supports the organisational process by providing ongoing financial and administrative support and nurturing group processes
- formalises the organisation with appropriate names, officers' titles and procedures
- turns the responsibility over to the students

In addition to contributing to the strategic planning at the university, the organisation has been involved in successful awareness events on campus. The group has recently moved into the community and high schools as well as into the political arena.

Education and awareness of staff

The implementation of many success factors is highly dependent on the development of disability-related knowledge among teaching staff and university administrators (Baggett 1994). This knowledge must include a general awareness about disability as well as an understanding of the specific needs created by disability, both academically and practically.

An extremely innovative program that has been used in the USA is the Project DO-IT (Burgstahler 1994). This project was used to improve teaching staff attitudes towards students with disabilities and increase their disability-related skills, at the same time as enhancing the preparation of students themselves for tertiary study. This model is a significant expansion of the Uni-Taste Program that has been used in Queensland in recent years. The response of teaching staff to the program is consistently positive, with most staff enlisting to teach in DO-IT again the following year. They also rated the student performance of the disability group as being higher than that of the general student body.

Project DO-IT—National Science Foundation

DO-IT (Disabilities, Opportunities, Internetworking and Technology) was designed to increase the participation of students with disabilities in science, engineering and mathematics programs and careers. However, an important component of the project is to improve the attitudes and knowledge of staff. Disability awareness activities include presentations to teaching staff, opportunities to teach students with disabilities, access to publications, videos and electronic resources.

The project operates through a yearly live-in summer program for high school students with disabilities. Teaching staff deliver laboratory classes to these students. During the teaching period, staff are supported by training presentations and information resources that have been produced specifically for this experience.

Teaching staff have noted that information should be delivered to them in a multi-modal fashion. For instance, Baggett's (1994) survey of teaching staff suggested that they would respond well to a comprehensive information package that consisted of one or more medium, e.g. round-table discussions with disability staff; e-mail bulletin board contact; a disability newsletter; an accessible information booklet; and orientation programs and workshops.

However, in any information package, emphasis must be given to the individual nature of disability-related problems despite identical disability labels. Further, it must be noted that students may be reluctant to approach staff and that it may be necessary for the instructors to make the first contact (Hill 1991).

In terms of increasing general awareness of disability issues among all staff, a recent collaborative project was developed by the Northern Territory University and Institute of TAFE. The Take a Good Look Project involved a public audit of physical accessibility issues that involved the community and other institutions.

The Take A Good Look Project

The Take a Good Look Project was a month-long audit and awareness program initiated in 1996. The program was managed by the Equal Opportunity Unit at the Northern Territory University. All buildings and practices were subjected to an 'access audit'. The major goals of the program were to:

- support management and staff to learn about disability
- provide workshops to train teaching staff about disability
- conduct awareness campaigns for students and student organisations
- provide open forums, debates, workshops etc. for all general public, including staff
- conduct an audit of all buildings and facilities and plans to highlight access needs
- develop a strategic plan for the improvement of access on campus

The project was extremely successful, leading to significant changes in the accessibility of the campus and improved attitudes about disability. In addition, the project brought about co-operation between the university, TAFE and the community in a highly positive manner.

Teaching incentives

It is important to note that inclusive teaching and administrative practices are costly and stressful for staff (Meekosha et al. 1991). Educators can only be expected to provide appropriate responses to people with disabilities if sufficient incentives are available. Unfortunately, such incentives are often intimately tied into the funding structures of the institutions. Although teaching award schemes are supported in the TAFE system, teaching is generally unrewarded.

The Industry Commission (1997) concluded that greater use of performance-based funding, even within a block granting scheme, would represent a form of 'managed competition' that would advantage people with disabilities. In this type of model, funding could be linked to the performance of desired outcomes, targets and best practice in teaching for equity groups. The commission acknowledged that the development of such a model is highly challenging but potentially rewarding.

Factors at the policy and co-ordination level

Several researchers have shown that equity is highly dependent on the integration of political and legislative structures and the co-ordination of services. However, the nature of these services and the methods by which they collaborate will be best guided by people with disabilities and, more particularly, students with disabilities. Direct representation of this population at a political level is essential. Finally, it is important to note that appropriate legislation can precipitate enormous changes if its implementation is plausible, sufficiently funded and adequately monitored.

Collaboration and co-ordination

Several recent reviews (ANTA 1997; West 1997) have supported the development of a 'seamless' system that enables people to progress smoothly through the various levels and services of education and training. In such a system, every person with a disability would have access to post-secondary school education, reliable information and a range of choices. The common thread running through this system would be the individual's needs rather than structural, regulatory and resourcing arrangements, necessitating a high level of co-operation and co-ordination (Hartley 1996). Although there is an increasing awareness of the benefits of collaboration and co-ordination, particularly in relation to the more efficient use of resources, an 'entrenched culture' that supports this process is yet to be attained (DETAFE 1996, p.36).

In recent years, several attempts have been made to address the need for collaboration across governmental sectors and across institutions (e.g. the Disability Reform Package and the Higher Education Co-operative Projects). Barnett, Jardine and Wilson (1997) provided a cogent discussion of the factors that must be considered. The key elements of cross-sectoral collaboration are:

- clear information exchange regarding roles and responsibilities
- incentives, such as joint funding, to encourage collaboration
- structural mechanisms that enhance collaboration
- an over-arching policy framework that endorses collaboration

In relation to the co-ordination of services, the philosophy underlying the Regional Disability Liaison Officer Project can be held up as an example.

The Regional Disability Liaison Officer Project

The RDLO Project aims to foster high quality post-school services to students with disabilities by accessing, co-ordinating and monitoring relevant services. The RDLO acts as a manager in a particular region to:

- support all educational and community staff who are working with students
- promote the development of appropriate transition programs
- provide information to all concerned parties
- co-ordinate specific programs and broader service systems
- monitor the quality of disability support programs in the region

The RDLO does not work with individual clients—this role falls to the disability officers at particular institutions. Instead, the RDLOs focus on fostering co-operation and co-ordination among services and levels within the educational sector. This role also involves liaison with government representatives as a means of bringing about change at a political level. Co-ordination at this level is often overlooked or left to individual disability officers and, due to their workload, does not occur.

Appropriate legislation and implementation

As Barnett, Jardine and Wilson (1997) noted, appropriate legislation is perhaps the most important starting point for change, particularly if that legislation addresses structural barriers in a clear and practical manner and is associated with mechanisms for implementation. Burdekin (1995) noted that law can be used as a 'lever to advance the rights of . . . people with disabilities' (p.15). Lawrence (1997) concluded that Australia has reached stage 3 in the progression towards equity:

- stage 1: access and entry routes are established
- stage 2: rules, policies and procedures are applied in an equal manner
- stage 3: special arrangements are developed for equity groups
- stage 4: decisive policies are developed to make equity systemic
- stage 5: genuine equity is achieved

To facilitate a move to stages 4 and 5, it is vital that affirmative action is taken at a legislative level. Specifically, incentives must be linked to the representation of people with disabilities and rewards must be put in place for equity initiatives in teaching. An example of legislation that appears to have been adequately implemented in a manner that has encouraged progress for people with disabilities is the Disability Discrimination Act (1992).

The Disability Discrimination Act

The Disability Discrimination Act came into effect in 1992 with the purpose of eliminating 'as far as possible, discrimination against persons on the grounds of disability and to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community'. This legislation also represented an attitudinal shift away from the provision of welfare services and into the maintenance of human rights (ANTA 1995). This shift effectively placed the onus of access onto the organisations. The impact of this legislation on higher education and the VET sector has been to:

- raise the image of students with disabilities
- require education/training institutions to address equity issues
- encourage the development of disability standards in education

Immediately after the implementation of the Act, 22 complaints were made regarding education. By 1997, this number had risen to 99, indicating that discriminatory practices were certainly being identified and addressed as a result of the legislation. Many educational complaints have been effectively conciliated prior to formal hearings, particularly those relating to the VET and higher education sectors (Hastings 1995). This finding indicates that the legislation has a role in positive attitude change through mediation as well as the usual punitive manner.

However, legislation is unlikely to be appropriate if it is not developed with significant input from people with disabilities. Disability reference groups and representative councils are vital, providing the consultation occurs at the 'grassroots' level. While parents and spouses of people with disabilities clearly can make a significant contribution to legislation, they may advocate for different issues and may not fully understand the experience of the person with the disability. Similarly, peak organisations may not always represent the needs of their population.

To ensure that the needs of people with disabilities are addressed, the physical representation of the group must increase, producing a critical mass. Accordingly, it is necessary to implement decisive policies that immediately increase the presence of people with disabilities in the VET sector. A practical strategy that has demonstrated the ability to increase access is the Victorian Negotiated Targets Strategy (Lundberg & Cleary 1995). As emphasised by this project, it is not unreasonable to expect institutions to support a reasonable percentage of students with disabilities to ensure adequate representation of this group in future.

The Negotiated Targets Strategy

The Negotiated Targets Strategy (NTS) was an initiative at the Box Hill College of TAFE in 1987 to improve social justice for a range of groups. Places were targetted in courses where these groups were under-represented and support workers were employed. The pilot was so successful that it expanded across several TAFE colleges and was supported by the 1990 Victorian VET Act. Students with disabilities were seen as the target group whose participation in VET had increased most significantly as a result of the NTS. Other States in Australia have followed this example, which should lead to increased participation rates for people with disabilities in future.

Monitoring, evaluation and data collection

Even with the best legislation and codes of practice, researchers have noted that ongoing monitoring and independent evaluation are essential (Meekosha et al. 1991). In addition, the planning, development and implementation of appropriate legislation has been found to be dependent on adequate data collection that reliably reflects the needs and outcomes of students with

disabilities (AVETMISS 1996). To ensure that appropriate performance standards are being met throughout Australia (i.e. in accordance with existing policies), NCVER (1997) has recommended that:

- the priorities developed through the National Strategy must reflect the needs of key stakeholders (presumably gathered through direct consultation)
- a strategic program must be developed and managed effectively
- research findings must be gathered and disseminated to key stakeholders

ANTA (1995) has also recognised the need for the collection, dissemination and management of consistent information about current access, participation and outcomes for students with disabilities, the needs of those students, the services that are available to assist them, examples of good practices and reliable performance measures. Consequently, in 1996, the major objectives of AVETMISS, the data collection body of ANTA, were to:

- establish nationally consistent data definitions
- maintain a national system of accurate, consistent and reliable measurement
- implement a timely and accurate national reporting system for performance measures

A quality assurance study conducted by the Canberra Institute of Technology (Wapshere 1997) identified a series of performance indicators that could be used to monitor the progress towards access and equity targets for people with disabilities. These indicators were identified through consultation with key parties. If such indicators could be identified across all Australian VET institutions, equity could be monitored, compared, improved and rewarded.

Summary

Reis and Neu (1994) have noted, the barriers that exist in the vocational education and training system have not stopped a significant proportion of individuals with disabilities from achieving successful outcomes. However, it is important to examine the factors that are associated with success as these factors will provide the greatest potential for improved service delivery. Specifically, success factors have been identified at the levels of:

- the individual (i.e. motivation and support networks)
- the service delivery (i.e. preparation services, individualised services, staff awareness)
- the political context (i.e. collaboration/co-ordination, legislation, monitoring and evaluation)

Several innovative programs have been conducted throughout Australia and overseas in an attempt to implement these success factors. Particularly successful programs were those that implemented the success factor in a manner that provided additional benefits for students or systems. For instance, the programs reviewed in this publication approached long-standing issues and needs from a fresh and innovative perspective and tended to make use of new technologies.

Findings and directions for further research

THE CURRENT PROJECT has focussed on equity for people with disabilities in the VET sector. The last few years have been a time of extensive change in these areas. At the same time, there have been significant developments in the human rights and disability sectors that have impacted profoundly on VET. These developments have ensured that equity is a major focus of service delivery and planning in vocational education and training.

Nevertheless, equity for people with disabilities remains elusive and they continue to be under-represented in VET. For instance, people with disabilities are under-represented in terms of enrolment numbers, the distribution across courses and levels of difficulty, the level and rate of completion, the subsequent employment and remuneration rate and the extent to which they feel satisfied with the experience.

Barriers to equity

Barriers exist at several levels in the post-secondary school education and training sectors. Although the distinction between these clusters is not always clear, there appear to be three major types of barriers, namely those that:

- prevent people with disabilities from accessing study options
- prevent students with disabilities from participating fully in their programs
- prevent students with disabilities from achieving positive outcomes

For instance, people with disabilities can be prevented from accessing post-secondary school studies because there is no clear pathway for them to follow and a lack of information about their options or rights. Further, access may not be possible because of the absence of collaboration and co-ordination among

the necessary support services and related bodies. At this political level, the likelihood that equity access programs are implemented will depend on the amount of reliable data that are available about the needs and representation of students with disabilities. The success of these programs will depend on the existence of favourable policy and legislation. At a more personal level, people with disabilities may be less likely to access studies because of the disincentives and their own personal issues.

Strategies to increase access

To increase access to post-secondary school education, the VET and higher education sectors must enable co-ordination and collaboration among service providers. Such collaboration will assist the dissemination of information and the development of clear pathways for students to follow. Similarly, greater collaboration and co-ordination will automatically facilitate more consistent and informative data collection regarding current circumstances and future needs and will highlight areas where equity policy requires improved implementation. In delivering information and options to potential students with disabilities, it is important to address the financial disincentives and personal barriers they will face should they elect to further their education. Students must be given opportunities to overcome such barriers as soon as possible.

The ability of students with disabilities to participate fully in their study programs will depend greatly on the level of support they receive during their studies. The nature of students' support needs will be determined by their particular problems and disadvantages. However, the extent to which their needs can be satisfied will depend on whether or not they register those needs, the attitudes and skills of staff, the funding models and the practical implementation of equity policy. The physical accessibility of such support services and facilities will also determine the extent of the students' participation in studies.

Strategies to increase participation

To increase participation in post-secondary school education, it is imperative that students with disabilities receive individualised support that responds to their particular disability-related difficulties. Students must be encouraged to register those support needs through thorough need assessment and less humiliating or complicated registration processes. The success of support services will depend on the funding models that are adopted by the sectors, the attitudes of staff towards the implementation of supportive practices and the skills such staff have in the delivery of inclusive materials. Because equity policies are subject to a great deal of ambiguity regarding implementation, sufficient monitoring must occur to ensure that support services are responding to the needs of the student population.

Finally, positive outcomes from post-secondary school studies may be prevented by the absence of disability-related knowledge and understanding, inequitable teaching and assessment practices and negative attitudes towards the inclusion of students with disabilities. Failure to monitor the success of support programs, teaching quality and policy implementation will also lead to barriers that prevent students from achieving graduation. Further, inadequate attention to planning for the transition to employment will threaten the utility of vocational education and training courses for students with disabilities.

Strategies to increase outcomes

To increase the positive outcomes that are achieved as a result of post-secondary school education, it is necessary to enhance the disability-related knowledge of teaching and support staff to maximise the potential for equitable teaching and assessment practices. Such practices will ensure that students with disabilities have equitable opportunities to complete courses and move into employment. However, the move to employment or further education must be facilitated for these students through the implementation of appropriate planning and transition programs. The outcomes of teaching, support and transition programs must be monitored regularly to ensure that outcomes are meaningful and lasting.

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Success factors

A reasonably large number of people with disabilities do achieve success, despite the barriers that are evident in the post-school education and training system. These success factors will provide the greatest potential for improved service delivery, particularly if such knowledge is consolidated. Success factors exist at three major levels, namely the level of the individual, the service delivery system and the political and legislative context.

Individual-level factors

Individuals with disabilities who are successful in their studies tend to have control over their lives and surroundings, a desire to succeed, well-planned goals, persistence, adaptability (i.e. able to adapt to their environment), and an adequate social support network.

> Innovative programs involving the facilitation of personal connections and supports, such as that associated with a mentoring scheme, have been found to be a successful model of service delivery in terms of increasing students' motivation and success rates. The empowerment of students to be self-determined is also vital.

Service-delivery factors

Success among students with disabilities has been attributed to four major service-delivery factors, namely adequate planning and preparation for post-secondary school study, individualised service provision, sufficient staff awareness about disability, and incentives to deliver inclusive services.

Planning and preparation for post-secondary school studies

Preparation can be achieved through numerous strategies, including:

- development of basic competencies
- individualised planning and transition programs to prepare students for future studies
- information about post-school options that is accessible for students with disabilities

An innovative method of allowing students with disabilities to acquire basic competencies should be placed in a self-paced program that is easily accessed (e.g. using technology) and has embedded opportunities for transition to higher-level courses or employment.

Individualised planning and transition programs are most successful and innovative when they begin early in the educational career of the individual. Planning is an ongoing process that should circumvent repeated assessments to some extent if it is refined with the maturation of the individual. The planning and transition process has been found to be particularly useful if meaningful achievements, such as employment, are built into the program. At least, the planning documents could be used to form a curriculum vitae as implemented in the UK.

Information for students must be available in a manner that avoids the 'gatekeeping' processes that can occur. Information must be freely available, comprehensive and focussed on the individual rather than carers or service providers (i.e. guidance officers). Innovative information packages have delivered information through the use of technology (i.e. internet). These packages have included information about choices, rights and success factors, in a manner that assists potential students to fully evaluate their choices.

Individualised service delivery

Individualised service delivery has been found to be associated with successful outcomes for students with disabilities. Students with disabilities who were consulted about their needs were likely to graduate at the same rate as students without disabilities and report high levels of employment within a shorter time period than usual. Student-focussed teaching has also been found to be facilitated by innovative programs that empower students to contribute to the development of inclusive teaching practices.

Several individualised programs have been developed recently. These programs are based on the notion of flexible service delivery that responds to the needs of the individual student and allows students to undertake the course in the manner that best suits their disability. Anecdotal evidence suggests that this model is extremely successful when students are consulted about their studies and are empowered to contribute to the teaching and learning process. However, the individualised approach remains dependent on the ability and willingness of the service provider to address students' needs in a creative manner despite the absence of incentives and without disadvantaging those students.

Staff awareness of disability

The implementation of many success factors is highly dependent on the development of disability-related knowledge among teaching staff and university administrators. This knowledge must include a general awareness about disability as well as an understanding of the needs created by disability, both academically and practically.

Information and awareness campaigns can be extremely successful in altering negative attitudes or increasing knowledge about disability. However, the most successful programs are those that encourage contact between teachers and students with disabilities in a positive context for a sufficient period of time to allow positive relationships to develop. Programs must also include regular audits of the extent to which practices are inclusive.

Incentives for teaching staff

Educators can only be expected to provide appropriate responses to people with disabilities if sufficient incentives are available. Inclusive teaching practices can be costly and stressful, often leading to disadvantage because the reward and incentive structures of many institutions focus on other activities (e.g. research or administration). It is imperative that quality teaching practices are recognised and rewarded.

A model that has been proposed for encouraging equity practices involves the use of performance-based funding. In this model, quality teaching and equity outcomes would be rewarded through the provision of funding to the institution and teaching awards at both the institutional and individual level. Such a model would be difficult to quantify and implement, but would address the inequities created by current funding models.

Political-level factors

It is important to note that appropriate legislation and decisive policies can precipitate enormous changes. To ensure the existence of appropriate legislation, students with disabilities must be represented at a political level. In addition, the planning, development and implementation of appropriate legislation has been found to be dependent on adequate data collection, adequate funding and sufficient co-operation between services. Further, it is necessary to monitor the implementation of legislation and evaluate its success against nationally recognised standards. Evaluation and data collection are extremely complicated tasks that must be conducted by independent evaluators or thoroughly trained personnel.

Other areas for further investigation

The current review has highlighted several areas where further investigation might be necessary. Among other things, the review has demonstrated that equity is dependent upon several critical factors, namely, consistent data collection, reliable evaluation and feedback, specialised training for teachers, co-ordination among services and effective monitoring of equity procedures.

Although the VET sector is currently moving towards centralised monitoring and evaluation through NCVER and AVETMISS, it would seem that the current vocational education and training system is too complex and diverse to allow this task to be achieved easily. It may be more efficient to establish specialised centres of excellence as have become popular in the USA. These centres may or may not be connected to universities and could act as independent bodies that specialise in equity for people with disabilities in VET. Capitalising on the talents of higher-degree students and independent funding sources, the centres could be responsible for:

- monitoring equity processes in a reasonably small and manageable region and relaying data to a centralised body (such as ANTA) for collation and dissemination
- developing a research agenda to advance knowledge about equity in the educational and training sectors in collaboration with a centralised body (such as NCVER)
- organising, gathering and collating data for centralised bodies (such as AVETMISS and DETYA) and ensuring the reliability and validity of such data
- training and deploying independent evaluators who can perform reliable and valid assessments of the efficacy of various institutions and support services in relation to their responsiveness to equity policy and the needs of students with disabilities
- collaborating with government bodies in terms of policy and planning
- training and accrediting teachers to work with post-secondary school students with disabilities through post-graduate qualifications or continuing education programs
- placement of teachers and other professionals in supervised practicums to advance their disability-knowledge and teaching skills
- co-ordinating programs aimed at education and awareness such as 'Project DO-IT' and 'Take a Good Look'
- networking and co-ordinating disability services in a similar capacity as the RDLO
- providing a centralised point of unbiased information dissemination for governments, institutions, teachers and students/families

In terms of a research agenda that might be conducted by any specialist unit in this area, it would seem pertinent to ensure that several topics receive intensive attention in the near future. Specifically, it is important to investigate:

- the efficacy of teaching incentives and the potential for a performance-based funding model
- the success of transition/planning and co-ordination programs to determine the optimum design
- the best method of disseminating information about post-secondary school options to people with disabilities
- the efficacy of technologies such as multi-media in the teaching of students with disabilities
- the most effective methods of encouraging inclusive teaching practices and attitudes
- the needs of students with disabilities who live in rural areas or are of Aboriginal and Torres Strait Islander descent
- the cost and efficacy of physical access audits at all post-secondary school venues

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This review of research is one of a series of reports commissioned to draw conclusions from the research on key topics in vocational education and training.

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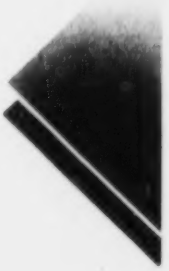

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